1) Name of organization:	FAA

2) Specific responsibilities and R&D interests:	

The Federal Aviation Administration's (FAA) mission is to provide a safe, secure, and efficient aerospace system that contributes to national security and promotion of U.S. aerospace safety. As the leading authority in the international aerospace community, the FAA is responsive to the dynamic nature of customer needs, economic conditions, and environmental concerns. Key mission elements are: (1) the regulation of civil aviation and commercial space transportation to promote safety; and (2) the safe and efficient use of airports and the airspace by both civil and military aircraft.

To accomplish this mission, the FAA's Research, Engineering, and Development (R,E&D) program develops and validates technology, systems, design, and procedures that directly support six of the agency's principal operational and regulatory responsibilities: acquisition, air traffic services, certification of aircraft and aviation personnel, operation and certification of airports, civil aviation security, and environmental standards for civil aviation

The FAA's R,E&D program has made significant contributions to ensure the safety, efficiency, capacity, and cost-effectiveness of the national aviation system. Today, that system is under heavy pressure to keep pace with rising air traffic and commercial space transportation demands, needs for essential safety and security improvements, airspace user requirements for more flexible and efficient air traffic management operations, and demands for further mitigation of the environmental impacts of aircraft operations.

As air travel increases, the agency's R&D work will take on added significance. To meet these future challenges, the FAA employs a comprehensive, agencywide R,E&D investment analysis process to assure that available resources remain customer-focused (in terms of the Government Performance and Results Act concepts of "outcomes" and "outputs") and targeted on the highest priority activities.

The agency's first priority is safety. The accident rate has dropped dramatically over the past 20 years because of the introduction of new technologies and procedures based on research and development (R&D) contributions from the FAA, NASA, and, to a lesser extent, the Department of Defense (DOD). As traffic doubles over the next 15 to 20 years (and with an even higher growth rate forecast for commercial space transportation), it will be necessary to reduce the current accident rate by 50 percent to hold the annual number of accidents at today's level. The R,E&D program supports essential initiatives to reach the goal of reducing fatal accidents by 80 percent by the year 2007.

The R,E&D program also supports the goals and objectives of the agency's strategic plan, as well as the requirements associated with the evolving air traffic system architecture. A major FAA challenge today is modernizing an aging infrastructure of air navigation facilities. A major infusion of new technology and procedures is essential if air traffic services are to continue to support safe and efficient flight operations in the future. The system architecture provides the roadmap for this continuing modernization process, and the R,E&D program provides the necessary system development initiatives.

A safe and efficient air transportation system also is essential to both the Nation's economic prosperity and for national defense. In 1993, aviation and related industries contributed almost $700 billion to the U.S. economy (6 percent of our gross domestic product) and accounts for over 8 million job. Aviation is the largest export sector of our economy, with a $25-billion trade surplus in 1994. The industry expects to deliver over 14,000 transport aircraft valued at $1 trillion over the next 20 years. A viable FAA R,E&D program is critical to assure the continued safety and efficiency of the air transportation system and continued U.S. technical and economic leadership in aviation.

The FAA's R,E&D program is functionally divided into six areas: air traffic services, airport safety technology, aircraft safety, system security, human factors and aviation medicine, and environment and energy, which are separately described in the following sections.